

ABSTRACT

The invention pertains to technological apparatus' for production of polarizers, obtained from lyotropic liquid crystals (LLC) based on organic compounds, in particular, dyes. The technological production line for polarizer
5 formation comprises at least one system of formation of polarizer films from LLC of at least one organic compound, at least one system of local removal of the polarizer film material obtained from LLC of at least one organic compound, at least one substrate holder and at least one means of relative movement. Also introduced, an apparatus for formation of polarizer films from LLC of at least one organic
10 compound and a system of localized removal of polarizer films obtained from LLC of at least one organic compound.

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| (71) Applicant (for all designated States except US): RUSSIAN TECHNOLOGY GROUP [US/US]; Suite 214, 1670 S. Amphlett Boulevard, San Mateo, CA 94402 (US). | Published <i>With international search report.</i> | |
| (72) Inventors; and (75) Inventors/Applicants (for US only): GVON, Khan Ir [RU/RU]; pr. Patsaeva, 14-26, Moscow Region, 141700, Dolgoprudny City (RU). BOBROV, Yuri A. [RU/RU]; Zelenograd., 906-128, Moscow, 103575 (RU). BYKOV, Victor A. [RU/RU]; Zelenograd., 815-200, Moscow, 103527 (RU). IGNATOV, Leonid Y. [RU/RU]; ul. Angarskaia, 20-3-81, Moscow, 127635 (RU). IVANOVA, Tatiana D. [RU/RU]; Zelenograd., 200-"G"-144, Moscow, 103305 (RU). POPOV, Sergei I. [RU/RU]; ul. Profsoyuznaia, 96-4-11, Moscow, 117485 (RU). SHISHKINA, Elena Y. [RU/RU]; ul. Angarskaia, 57-2-94, Moscow, 127412 (RU). VOROZHTSOV, Georgiy N. [RU/RU]; ul. Sadovaia-Spasskaia, 21-268, Moscow, 107078 (RU). | | |
| (54) Title: THERMOSTABLE AND LIGHTFAST DICHROIC LIGHT POLARIZERS | | |
| (57) Abstract <p>Polarizing coatings are formed from dyestuffs which provide a stable liquid crystalline phase in a wide range of concentrations, temperatures and pH-values. Particles formed by aggregates of the liquid crystal molecules are oriented in a predetermined direction to polarize light. The stability of the liquid crystalline state allows orienting the particles by mechanical forces such as a shearing force applied when the liquid crystal (10) is spread on a support surface (20) by a knife-like doctor (90) or a tension deformation force acting on the meniscus of the liquid crystal deposited between two surfaces (20, 30) as the surfaces are peeled off one another. As a result, the polarizing coatings are formed in some embodiments by simple methods. In some embodiments, the polarizing coatings have a high lightfastness, a high thermal stability, and a high dichroic ratio.</p> | | |

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